

REMARKS/ARGUMENTS

Claims 1–46 are pending in the above-captioned application. All of these claims stand rejected. With this paper, claims 1, 16, 17, 21, 30, and 42–44 have been amended, and claim 3 has been canceled. No new matter was added with the amendment.

I. Claim rejections under 35 U.S.C. § 102(e)

Claims 1–46 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Knapp et al. (U.S. Pat. No. 6,235,471 B1). This rejection is traversed. “[F]or anticipation under 35 U.S.C. § 102, a single reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present.” MPEP § 706.02. “The identical invention must be shown in as complete detail as is contained in the . . . claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, USPQ2d 1913, 1920 (Fed. Cir. 1989).

With regard to amended independent claims 1, 30, and 42, Knapp et al. are silent with regard to a container in addition to an array of materials. More important, Knapp et al. do not teach a simple logic control program that optimizes a course for selectively contacting one or more microfluidic device capillary elements and one or more selected material sites of one or more arrays of materials.

The phrase “wherein the at least one simple logic control program optimizes a course for selectively contacting the at least one capillary element and the material at the at least one selected material site” has been added to claims 1, 30, and 42. Support for these amendments can be found in the original claim 3, which has been cancelled with this paper, and in paragraph [0030], beginning at the bottom of page 8 of the application. Thus, no new matter was added with these amendments.

As the term is used by Applicant, a “simple logic control program” is “a procedure, or a sequence of coded or computational instructions, for achieving a solution to a problem or for accomplishing some end based upon a Boolean system of symbolic logic” Such programs “eliminate problems associated with controlling sampling patterns of microfluidic devices using robotic handling systems when both array formats and capillary element configurations are variable (e.g., in multiple dimensions).” *See* paragraphs [0030] and

[0031], beginning near the bottom of page 8 of the application (and corrected on page 2 of this paper).

Using the “simple logic control program,” a flag is set for any material site of an array that will not be contacted with a microfluidic device capillary element. The program then searches the array for the first flag that is not set and directs the robotic handling system to visit that material site, i.e., brings the capillary element(s) to the site(s) or brings the site(s) to the capillary element(s). The program then sets the flag(s) of the visited site(s) and searches for the next flag that is not set. These steps of searching, visiting, and resetting are repeated until all user-selected material sites have been visited. By proceeding from one unset flag to the next, the program optimizes a course for contacting the capillary element(s) with the user-selected site(s) of “essentially any number, combination, and/or density of microfluidic device capillary elements ... and arrayed materials sites....” See paragraphs [0031] and [0032] beginning on page 9 of the application.

While Knapp et al. do teach a microfluidic device handling system that operates in response to instructions from a computer (col. 57, lines 57–60, and FIG. 18), they do not provide any details regarding the program that would be used to provide these instructions and, in particular, do not teach regarding a simple logic control program. Thus, Knapp et al. do not teach every aspect of the claimed invention either explicitly or impliedly, nor do they show the identical invention claimed by Applicant in as complete detail as is contained in claim 1. Withdrawal of the rejection of claims 1, 30, and 42 under U.S.C. § 102(e) as being anticipated by Knapp et al. is, therefore, respectfully requested.

Claims 2, 4–29, 29–41, and 43–46 depend directly or indirectly from amended independent claims 1, 30, and 42. Therefore, Applicant respectfully submits that these dependent claims are allowable for at least the same reasons as have been set forth herein with respect to amended independent claims 1, 30, and 42. Withdrawal of the rejection of dependent claims 2, 4–29, 29–41, and 43–46 under U.S.C. § 102 (b) as being anticipated by Knapp et al. is also respectfully requested. Please note that claims 16, 17, 21, 43, and 44 have been amended to correct errors. These corrections do not add any new material.

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Garrett Unno
Reply to Office Action of March 24, 2005

Conclusion

For the foregoing reasons, Applicant believes all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned attorney.

Respectfully submitted,



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Signed: _____

